

FOUO "ET-460"

<151> January 5, 1998

<150> 60/074,086
<151> February 9, 1998

<150> 60/074,092
<151> February 9, 1998

<150> 60/075,945
<151> February 25, 1998

<150> 60/112,850
<151> December 16, 1998

<150> 60/113,296
<151> December 22, 1998

<150> 60/146,222
<151> July 28, 1999

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<151> September 16, 1998

<150> PCT/US98/25108
<151> December 1, 1998

<150> 09/216,021
<151> December 16, 1998

<150> 09/218,517
<151> December 22, 1998

<150> 09/254,311
<151> March 3, 1999

<150> PCT/US99/12252
<151> June 22, 1999

<150> PCT/US99/21090
<151> September 15, 1999

<150> PCT/US99/28409
<151> November 30, 1999

<150> PCT/US99/28313
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<151> February 11, 2000

<150> PCT/US00/04414
<151> February 22, 2000

<150> PCT/US00/05841
 <151> March 2, 2000

<150> PCT/US00/08439
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<150> PCT/US00/14042
 <151> May 22, 2000

<150> PCT/US00/20710
 <151> July 28, 2000

<150> PCT/US00/32678
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<150> PCT/US01/06520
 <151> February 28, 2001

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 gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200
 cagtcctaga ctgggtcttct acactaagac accatgaagg agtatgtgct 250
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 gtcccacaat caactaagtg aataaccact taatcttccc aatcattag 750
 cagaactcag aattcatgaa aataaagtta agaaaatata aaaggacaca 800

Ile	Glu	Pro	Gly	Ala	Phe	Glu	Gly	Val	Thr	Val	Phe	His	Ile	Arg	215	220	225
Ile	Ala	Glu	Ala	Lys	Leu	Thr	Ser	Val	Pro	Lys	Gly	Leu	Pro	Pro	230	235	240
Thr	Leu	Leu	Glu	Leu	His	Leu	Asp	Tyr	Asn	Lys	Ile	Ser	Thr	Val	245	250	255
Glu	Leu	Glu	Asp	Phe	Lys	Arg	Tyr	Lys	Glu	Leu	Gln	Arg	Leu	Gly	260	265	270
Leu	Gly	Asn	Asn	Lys	Ile	Thr	Asp	Ile	Glu	Asn	Gly	Ser	Leu	Ala	275	280	285
Asn	Ile	Pro	Arg	Val	Arg	Glu	Ile	His	Leu	Glu	Asn	Asn	Lys	Leu	290	295	300
Lys	Lys	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Leu	Lys	Tyr	Leu	Gln	Ile	305	310	315
Ile	Phe	Leu	His	Ser	Asn	Ser	Ile	Ala	Arg	Val	Gly	Val	Asn	Asp	320	325	330
Phe	Cys	Pro	Thr	Val	Pro	Lys	Met	Lys	Lys	Ser	Leu	Tyr	Ser	Ala	335	340	345
Ile	Ser	Leu	Phe	Asn	Asn	Pro	Val	Lys	Tyr	Trp	Glu	Met	Gln	Pro	350	355	360
Ala	Thr	Phe	Arg	Cys	Val	Leu	Ser	Arg	Met	Ser	Val	Gln	Leu	Gly	365	370	375
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<220>
 <223> Synthetic Oligonucleotide Probe

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<210> 4
 <211> 24
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<220>
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<220>
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<211> 3441
<212> DNA
<213> Homo Sapien

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cggggagcca ggcgctgagg agcgggcccc tggtgacggc cacacggact 650
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ctagaaggcc cccacagca gggcgtaggg ggcacacccc tgctcactct 1050

TCGTCAGTT

Arg	Cys	Val	Leu	Cys 80	Ala	Cys	Glu	Ala	Pro 85	Gln	Trp	Gly	Arg	Arg 90
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Cys	Pro	Thr	Pro	Ala 110	Cys	Gly	Gln	Pro	Arg 115	Gln	Leu	Pro	Gly	His 120
Cys	Cys	Gln	Thr	Cys 125	Pro	Gln	Glu	Arg	Ser 130	Ser	Ser	Glu	Arg	Gln 135
Pro	Ser	Gly	Leu	Ser 140	Phe	Glu	Tyr	Pro	Arg 145	Asp	Pro	Glu	His	Arg 150
Ser	Tyr	Ser	Asp	Arg 155	Gly	Glu	Pro	Gly	Ala 160	Glu	Glu	Arg	Ala	Arg 165
Gly	Asp	Gly	His	Thr 170	Asp	Phe	Val	Ala	Leu 175	Leu	Thr	Gly	Pro	Arg 180
Ser	Gln	Ala	Val	Ala 185	Arg	Ala	Arg	Val	Ser 190	Leu	Leu	Arg	Ser	Ser 195
Leu	Arg	Phe	Ser	Ile 200	Ser	Tyr	Arg	Arg	Leu 205	Asp	Arg	Pro	Thr	Arg 210
Ile	Arg	Phe	Ser	Asp 215	Ser	Asn	Gly	Ser	Val 220	Leu	Phe	Glu	His	Pro 225
Ala	Ala	Pro	Thr	Gln 230	Asp	Gly	Leu	Val	Cys 235	Gly	Val	Trp	Arg	Ala 240
Val	Pro	Arg	Leu	Ser 245	Leu	Arg	Leu	Leu	Arg 250	Ala	Glu	Gln	Leu	His 255
Val	Ala	Leu	Val	Thr 260	Leu	Thr	His	Pro	Ser 265	Gly	Glu	Val	Trp	Gly 270
Pro	Leu	Ile	Arg	His 275	Arg	Ala	Leu	Ala	Ala 280	Glu	Thr	Phe	Ser	Ala 285
Ile	Leu	Thr	Leu	Glu 290	Gly	Pro	Pro	Gln	Gln 295	Gly	Val	Gly	Gly	Ile 300
Thr	Leu	Leu	Thr	Leu 305	Ser	Asp	Thr	Glu	Asp 310	Ser	Leu	His	Phe	Leu 315
Leu	Leu	Phe	Arg	Gly 320	Leu	Leu	Glu	Pro	Arg 325	Ser	Gly	Gly	Leu	Thr 330
Gln	Val	Pro	Leu	Arg 335	Leu	Gln	Ile	Leu	His 340	Gln	Gly	Gln	Leu	Leu 345
Arg	Glu	Leu	Gln	Ala 350	Asn	Val	Ser	Ala	Gln 355	Glu	Pro	Gly	Phe	Ala 360
Glu	Val	Leu	Pro	Asn	Leu	Thr	Val	Gln	Glu	Met	Asp	Trp	Leu	Val

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380	385	390
Leu Arg Ile Ser Gly His Ile Ala Ala Arg Lys Ser Cys Asp Val		
395	400	405
Leu Gln Ser Val Leu Cys Gly Ala Asp Ala Leu Ile Pro Val Gln		
410	415	420
Thr Gly Ala Ala Gly Ser Ala Ser Leu Thr Leu Leu Gly Asn Gly		
425	430	435
Ser Leu Ile Tyr Gln Val Gln Val Val Gly Thr Ser Ser Glu Val		
440	445	450
Val Ala Met Thr Leu Glu Thr Lys Pro Gln Arg Arg Asp Gln Arg		
455	460	465
Thr Val Leu Cys His Met Ala Gly Leu Gln Pro Gly Gly His Thr		
470	475	480
Ala Val Gly Ile Cys Pro Gly Leu Gly Ala Arg Gly Ala His Met		
485	490	495
Leu Leu Gln Asn Glu Leu Phe Leu Asn Val Gly Thr Lys Asp Phe		
500	505	510
Pro Asp Gly Glu Leu Arg Gly His Val Ala Ala Leu Pro Tyr Cys		
515	520	525
Gly His Ser Ala Arg His Asp Thr Leu Pro Val Pro Leu Ala Gly		
530	535	540
Ala Leu Val Leu Pro Pro Val Lys Ser Gln Ala Ala Gly His Ala		
545	550	555
Trp Leu Ser Leu Asp Thr His Cys His Leu His Tyr Glu Val Leu		
560	565	570
Leu Ala Gly Leu Gly Gly Ser Glu Gln Gly Thr Val Thr Ala His		
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Leu Leu Gly Pro Pro Gly Thr Pro Gly Pro Arg Arg Leu Leu Lys		
590	595	600
Gly Phe Tyr Gly Ser Glu Ala Gln Gly Val Val Lys Asp Leu Glu		
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Pro Glu Leu Leu Arg His Leu Ala Lys Gly Met Ala Ser Leu Met		
620	625	630
Ile Thr Thr Lys Gly Ser Pro Arg Gly Glu Leu Arg Gly Gln Val		
635	640	645
His Ile Ala Asn Gln Cys Glu Val Gly Gly Leu Arg Leu Glu Ala		
650	655	660

Ala Gly Ala Glu Gly Val Arg Ala Leu Gly Ala Pro Asp Thr Ala	665	670	675
Ser Ala Ala Pro Pro Val Val Pro Gly Leu Pro Ala Leu Ala Pro	680	685	690
Ala Lys Pro Gly Gly Pro Gly Arg Pro Arg Asp Pro Asn Thr Cys	695	700	705
Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp Ala Pro	710	715	720
Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg Arg Thr	725	730	735
Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His	740	745	750
Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys	755	760	765
Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro	770	775	780
Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala	785	790	795
Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys	800	805	810
Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys	815	820	825
Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg	830	835	840
Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly	845	850	855
Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg	860	865	870
Gly Cys Arg Phe Ala Gly Gln Trp Phe Pro Glu Ser Gln Ser Trp	875	880	885
His Pro Ser Val Pro Pro Phe Gly Glu Met Ser Cys Ile Thr Cys	890	895	900
Arg Cys Gly Ala Gly Val Pro His Cys Glu Arg Asp Asp Cys Ser	905	910	915
Leu Pro Leu Ser Cys Gly Ser Gly Lys Glu Ser Arg Cys Cys Ser	920	925	930
Arg Cys Thr Ala His Arg Arg Pro Pro Glu Thr Arg Thr Asp Pro	935	940	945
Glu Leu Glu Lys Glu Ala Glu Gly Ser			

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 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 9
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<210> 10
 <211> 36
 <212> DNA
 <213> Artificial Sequence

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<400> 10
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<210> 11
 <211> 36
 <212> DNA
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<220>
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<400> 11
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<220>
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<211> 22
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<220>
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<211> 3231
<212> DNA
<213> Homo Sapien

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cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

Top50 "ET4450"

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 tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200
 gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250
 cttcctgggt atactggaga gctttgccag tccaagattg attactgcat 1300
 cctagacca tgcagaaatg gagcaacatg catttccagt ctcagtggat 1350
 tcacctgcca gtgtccagaa ggatacttcg gatctgcttg tgaagaaaag 1400
 gtggaccctt gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450
 ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500
 cctgtgcca gcttattgac ttctgtgcc tcagccctg tgetcatggc 1550
 acgtgccgca gcgtgggcac cagctacaaa tgccctctgtg atccaggtta 1600
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 ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950
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 ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250
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 ctaattttct gcagctttta gtttggaata aatattttta aaacaaaatt 2500

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Cys Ile Cys Asn	Glu Gly Tyr Glu Gly	Pro Asn Cys Glu Gln Ala			
	125		130		135
Leu Pro Ser Leu	Pro Ala Thr Gly Trp	Thr Glu Ser Met Ala Pro			
	140		145		150
Arg Gln Leu Gln	Pro Val Pro Ala Thr	Gln Glu Pro Asp Lys Ile			
	155		160		165
Leu Pro Arg Ser	Gln Ala Thr Val Thr	Leu Pro Thr Trp Gln Pro			
	170		175		180
Lys Thr Gly Gln	Lys Val Val Glu Met	Lys Trp Asp Gln Val Glu			
	185		190		195
Val Ile Pro Asp	Ile Ala Cys Gly Asn	Ala Ser Ser Asn Ser Ser			
	200		205		210
Ala Gly Gly Arg	Leu Val Ser Phe Glu	Val Pro Gln Asn Thr Ser			
	215		220		225
Val Lys Ile Arg	Gln Asp Ala Thr Ala	Ser Leu Ile Leu Leu Trp			
	230		235		240
Lys Val Thr Ala	Thr Gly Phe Gln Gln	Cys Ser Leu Ile Asp Gly			
	245		250		255
Arg Ser Val Thr	Pro Leu Gln Ala Ser	Gly Gly Leu Val Leu Leu			
	260		265		270
Glu Glu Met Leu	Ala Leu Gly Asn Asn	His Phe Ile Gly Phe Val			
	275		280		285
Asn Asp Ser Val	Thr Lys Ser Ile Val	Ala Leu Arg Leu Thr Leu			
	290		295		300
Val Val Lys Val	Ser Thr Cys Val Pro	Gly Glu Ser His Ala Asn			
	305		310		315
Asp Leu Glu Cys	Ser Gly Lys Gly Lys	Cys Thr Thr Lys Pro Ser			
	320		325		330
Glu Ala Thr Phe	Ser Cys Thr Cys Glu	Glu Gln Tyr Val Gly Thr			
	335		340		345
Phe Cys Glu Glu	Tyr Asp Ala Cys Gln	Arg Lys Pro Cys Gln Asn			
	350		355		360
Asn Ala Ser Cys	Ile Asp Ala Asn Glu	Lys Gln Asp Gly Ser Asn			
	365		370		375
Phe Thr Cys Val	Cys Leu Pro Gly Tyr	Thr Gly Glu Leu Cys Gln			
	380		385		390
Ser Lys Ile Asp	Tyr Cys Ile Leu Asp	Pro Cys Arg Asn Gly Ala			
	395		400		405

Thr Cys Ile Ser	Ser Leu Ser Gly Phe	Thr Cys Gln Cys Pro Glu
410	415	420
Gly Tyr Phe Gly	Ser Ala Cys Glu Glu	Lys Val Asp Pro Cys Ala
425	430	435
Ser Ser Pro Cys	Gln Asn Asn Gly Thr	Cys Tyr Val Asp Gly Val
440	445	450
His Phe Thr Cys	Asn Cys Ser Pro Gly	Phe Thr Gly Pro Thr Cys
455	460	465
Ala Gln Leu Ile	Asp Phe Cys Ala Leu	Ser Pro Cys Ala His Gly
470	475	480
Thr Cys Arg Ser	Val Gly Thr Ser Tyr	Lys Cys Leu Cys Asp Pro
485	490	495
Gly Tyr His Gly	Leu Tyr Cys Glu Glu	Glu Tyr Asn Glu Cys Leu
500	505	510
Ser Ala Pro Cys	Leu Asn Ala Ala Thr	Cys Arg Asp Leu Val Asn
515	520	525
Gly Tyr Glu Cys	Val Cys Leu Ala Glu	Tyr Lys Gly Thr His Cys
530	535	540
Glu Leu Tyr Lys	Asp Pro Cys Ala Asn	Val Ser Cys Leu Asn Gly
545	550	555
Ala Thr Cys Asp	Ser Asp Gly Leu Asn	Gly Thr Cys Ile Cys Ala
560	565	570
Pro Gly Phe Thr	Gly Glu Glu Cys Asp	Ile Asp Ile Asn Glu Cys
575	580	585
Asp Ser Asn Pro	Cys His His Gly Gly	Ser Cys Leu Asp Gln Pro
590	595	600
Asn Gly Tyr Asn	Cys His Cys Pro His	Gly Trp Val Gly Ala Asn
605	610	615
Cys Glu Ile His	Leu Gln Trp Lys Ser	Gly His Met Ala Glu Ser
620	625	630
Leu Thr Asn Met	Pro Arg His Ser Leu	Tyr Ile Ile Ile Gly Ala
635	640	645
Leu Cys Val Ala	Phe Ile Leu Met Leu	Ile Ile Leu Ile Val Gly
650	655	660
Ile Cys Arg Ile	Ser Arg Ile Glu Tyr	Gln Gly Ser Ser Arg Pro
665	670	675
Ala Tyr Glu Glu	Phe Tyr Asn Cys Arg	Ser Ile Asp Ser Glu Phe
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Ser Asn Ala Ile	Ala Ser Ile Arg His	Ala Arg Phe Gly Lys Lys

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<213> Homo Sapien

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tctgtgacta agtctattgt ggctttgcgc ttaactctgg tgggaagggt 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttctgggtta tactggagag 450
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taggggag 508

<210> 20
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<220>
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<400> 20
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<210> 21
<211> 24
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<213> Artificial Sequence

<220>
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<400> 21
ctcagttcgg ttggcaaagc tctc 24

<210> 22
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<223> Synthetic oligonucleotide probe

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gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

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cagcaccag ggctgtcaag agcaggcacg ggccctgatg cgggacttcc 200

cgctcgtgga cggccacaac gacctgcccc tggctctaag gcagggttac 250

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 cagtctcaga gtctctcccc caccctgaca aaactcacac atgcccaccg 1350
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 aaaaccaag gacacc 1416

<210> 30
 <211> 446
 <212> PRT
 <213> Homo Sapien

<400> 30
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 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
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 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
 35 40 45
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

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Tyr	Gly	Gln	Thr	Ser 65	Leu	Asp	Arg	Leu	Arg 70	Asp	Gly	Leu	Val	Gly 75
Ala	Gln	Phe	Trp	Ser 80	Ala	Tyr	Val	Pro	Cys 85	Gln	Thr	Gln	Asp	Arg 90
Asp	Ala	Leu	Arg	Leu 95	Thr	Leu	Glu	Gln	Ile 100	Asp	Leu	Ile	Arg	Arg 105
Met	Cys	Ala	Ser	Tyr 110	Ser	Glu	Leu	Glu	Leu 115	Val	Thr	Ser	Ala	Lys 120
Ala	Leu	Asn	Asp	Thr 125	Gln	Lys	Leu	Ala	Cys 130	Leu	Ile	Gly	Val	Glu 135
Gly	Gly	His	Ser	Leu 140	Asp	Asn	Ser	Leu	Ser 145	Ile	Leu	Arg	Thr	Phe 150
Tyr	Met	Leu	Gly	Val 155	Arg	Tyr	Leu	Thr	Leu 160	Thr	His	Thr	Cys	Asn 165
Thr	Pro	Trp	Ala	Glu 170	Ser	Ser	Ala	Lys	Gly 175	Val	His	Ser	Phe	Tyr 180
Asn	Asn	Ile	Ser	Gly 185	Leu	Thr	Asp	Phe	Gly 190	Glu	Lys	Val	Val	Ala 195
Glu	Met	Asn	Arg	Leu 200	Gly	Met	Met	Val	Asp 205	Leu	Ser	His	Val	Ser 210
Asp	Ala	Val	Ala	Arg 215	Arg	Ala	Leu	Glu	Val 220	Ser	Gln	Ala	Pro	Val 225
Ile	Phe	Ser	His	Ser 230	Ala	Ala	Arg	Gly	Val 235	Cys	Asn	Ser	Ala	Arg 240
Asn	Val	Pro	Asp	Asp 245	Ile	Leu	Gln	Leu	Leu 250	Lys	Lys	Asn	Gly	Gly 255
Val	Val	Met	Val	Ser 260	Leu	Ser	Met	Gly	Val 265	Ile	Gln	Cys	Asn	Pro 270
Ser	Ala	Asn	Val	Ser 275	Thr	Val	Ala	Asp	His 280	Phe	Asp	His	Ile	Lys 285
Ala	Val	Ile	Gly	Ser 290	Lys	Phe	Ile	Gly	Ile 295	Gly	Gly	Asp	Tyr	Asp 300
Gly	Ala	Gly	Lys	Phe 305	Pro	Gln	Gly	Leu	Glu 310	Asp	Val	Ser	Thr	Tyr 315
Pro	Val	Leu	Ile	Glu 320	Glu	Leu	Leu	Ser	Arg 325	Gly	Trp	Ser	Glu	Glu 330
Glu	Leu	Gln	Gly	Val 335	Leu	Arg	Gly	Asn	Leu 340	Leu	Arg	Val	Phe	Arg 345

Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
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Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
				365					370					375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
				380					385					390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
				395					400					405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Pro	Asp	Lys	Thr	His
				410					415					420
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser
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Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr				
				440					445					

<210> 31
 <211> 1790
 <212> DNA
 <213> Homo Sapien

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 atccgcgcgg cgccgcgcgc cgttgetgcc cctgctgctg ctgctctgcg 200
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 ccccaggatc ccacgcttct catcggtctc tccctgctgg ccacctgctc 300
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 tcaacgggcg ccgcctgccc cctgagctct cccgtgtact caacgcctcc 400
 accttgctc tggccctggc caacctcaat gggccaggc agcggtcggg 450
 ggacaacctc gtgtgccacg ccctgacgg cagcatcctg gctggctcct 500
 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550
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 tgccacatcc ccaaggacct ggtctctctt acgccctatg agatctgggt 750
 ggaggccacc aaccgcctgg gctctgcccg ctccgatgta ctcacgctgg 800

Ser	Val	His	Gly	Asp 65	Pro	Pro	Gly	Ala	Thr 70	Ala	Glu	Gly	Leu	Tyr 75
Trp	Thr	Leu	Asn	Gly 80	Arg	Arg	Leu	Pro	Pro 85	Glu	Leu	Ser	Arg	Val 90
Leu	Asn	Ala	Ser	Thr 95	Leu	Ala	Leu	Ala	Leu 100	Ala	Asn	Leu	Asn	Gly 105
Ser	Arg	Gln	Arg	Ser 110	Gly	Asp	Asn	Leu	Val 115	Cys	His	Ala	Arg	Asp 120
Gly	Ser	Ile	Leu	Ala 125	Gly	Ser	Cys	Leu	Tyr 130	Val	Gly	Leu	Pro	Pro 135
Glu	Lys	Pro	Val	Asn 140	Ile	Ser	Cys	Trp	Ser 145	Lys	Asn	Met	Lys	Asp 150
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His	Thr	Asn	Tyr	Ser 170	Leu	Lys	Tyr	Lys	Leu 175	Arg	Trp	Tyr	Gly	Gln 180
Asp	Asn	Thr	Cys	Glu 185	Glu	Tyr	His	Thr	Val 190	Gly	Pro	His	Ser	Cys 195
His	Ile	Pro	Lys	Asp 200	Leu	Ala	Leu	Phe	Thr 205	Pro	Tyr	Glu	Ile	Trp 210
Val	Glu	Ala	Thr	Asn 215	Arg	Leu	Gly	Ser	Ala 220	Arg	Ser	Asp	Val	Leu 225
Thr	Leu	Asp	Ile	Leu 230	Asp	Val	Val	Thr	Thr 235	Asp	Pro	Pro	Pro	Asp 240
Val	His	Val	Ser	Arg 245	Val	Gly	Gly	Leu	Glu 250	Asp	Gln	Leu	Ser	Val 255
Arg	Trp	Val	Ser	Pro 260	Pro	Ala	Leu	Lys	Asp 265	Phe	Leu	Phe	Gln	Ala 270
Lys	Tyr	Gln	Ile	Arg 275	Tyr	Arg	Val	Glu	Asp 280	Ser	Val	Asp	Trp	Lys 285
Val	Val	Asp	Asp	Val 290	Ser	Asn	Gln	Thr	Ser 295	Cys	Arg	Leu	Ala	Gly 300
Leu	Lys	Pro	Gly	Thr 305	Val	Tyr	Phe	Val	Gln 310	Val	Arg	Cys	Asn	Pro 315
Phe	Gly	Ile	Tyr	Gly 320	Ser	Lys	Lys	Ala	Gly 325	Ile	Trp	Ser	Glu	Trp 330
Ser	His	Pro	Thr	Ala 335	Ala	Ser	Thr	Pro	Arg 340	Ser	Glu	Arg	Pro	Gly 345
Pro	Gly	Gly	Gly	Ala	Cys	Glu	Pro	Arg	Gly	Gly	Glu	Pro	Ser	Ser

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Gly	Pro	Val	Arg	Arg	Glu	Leu	Lys	Gln	Phe	Leu	Gly	Trp	Leu	Lys
				365					370					375
Lys	His	Ala	Tyr	Cys	Ser	Asn	Leu	Ser	Phe	Arg	Leu	Tyr	Asp	Gln
				380					385					390
Trp	Arg	Ala	Trp	Met	Gln	Lys	Ser	His	Lys	Thr	Arg	Asn	Gln	Asp
				395					400					405
Glu	Gly	Ile	Leu	Pro	Ser	Gly	Arg	Arg	Gly	Thr	Ala	Arg	Gly	Pro
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Ala Arg

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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 34
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgagccagcc caggaactgc ttg 23

<210> 35
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 35
 caagtgcgct gcaacccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36
 <211> 1771
 <212> DNA
 <213> Homo Sapien

<400> 36
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Val Lys Thr Thr	Cys Leu Cys Pro Asn	Phe Val Asn Thr Gly Phe			
	215	220			225
Ile Lys Asn Pro	Ser Thr Ser Leu Gly	Pro Thr Leu Glu Pro Glu			
	230	235			240
Glu Val Val Asn	Arg Leu Met His Gly	Ile Leu Thr Glu Gln Lys			
	245	250			255
Met Ile Phe Ile	Pro Ser Ser Ile Ala	Phe Leu Thr Thr Leu Glu			
	260	265			270
Arg Ile Leu Pro	Glu Arg Phe Leu Ala	Val Leu Lys Arg Lys Ile			
	275	280			285
Ser Val Lys Phe	Asp Ala Val Ile Gly	Tyr Lys Met Lys Ala Gln			
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<210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 ggtgaaggca gaaattggag atg 23

<210> 39
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 39
 atcccatgca tcagcctggt tacc 24

<210> 40
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 40
 gctgggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41
 <211> 1377
 <212> DNA
 <213> Homo Sapien

<400> 41

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<210> 42

<211> 243
 <212> PRT
 <213> Homo Sapien

<400> 42

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His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly	35	40	45	
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly	50	55	60	
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly	65	70	75	
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly	80	85	90	
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala	95	100	105	
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp	110	115	120	
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His	125	130	135	
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val	140	145	150	
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln	155	160	165	
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln	170	175	180	
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala	185	190	195	
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly	200	205	210	
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser	215	220	225	
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro	230	235	240	
Val	Phe	Ala																

<210> 43
 <211> 24

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
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<210> 44
 <211> 18
 <212> DNA
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<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 agccagcctc gctctcgg 18

<210> 45
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtctgcatc aggtctgg 18

<210> 46
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 <212> DNA
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<220>
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<400> 46
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<210> 47
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 47
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<210> 48
 <211> 45
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060907Z

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06093

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His Ala Ala Gly	Glu Cys Ala Arg Asn	Ala Thr Cys Thr His	Tyr		
	140		145		150
Thr Gln Leu Val	Trp Ala Thr Ser Ser	Gln Leu Gly Cys Gly	Arg		
	155		160		165
His Leu Cys Ser	Ala Gly Gln Thr Ala	Ile Glu Ala Phe Val	Cys		
	170		175		180
Ala Tyr Ser Pro	Gly Gly Asn Trp Glu	Val Asn Gly Lys Thr	Ile		
	185		190		195
Ile Pro Tyr Lys	Lys Gly Ala Trp Cys	Ser Leu Cys Thr Ala	Ser		
	200		205		210
Val Ser Gly Cys	Phe Lys Ala Trp Asp	His Ala Gly Gly Leu	Cys		
	215		220		225
Glu Val Pro Arg	Asn Pro Cys Arg Met	Ser Cys Gln Asn His	Gly		
	230		235		240
Arg Leu Asn Ile	Ser Thr Cys His Cys	His Cys Pro Pro Gly	Tyr		
	245		250		255
Thr Gly Arg Tyr	Cys Gln Val Arg Cys	Ser Leu Gln Cys Val	His		
	260		265		270
Gly Arg Phe Arg	Glu Glu Glu Cys Ser	Cys Val Cys Asp Ile	Gly		
	275		280		285
Tyr Gly Gly Ala	Gln Cys Ala Thr Lys	Val His Phe Pro Phe	His		
	290		295		300
Thr Cys Asp Leu	Arg Ile Asp Gly Asp	Cys Phe Met Val Ser	Ser		
	305		310		315
Glu Ala Asp Thr	Tyr Tyr Arg Ala Arg	Met Lys Cys Gln Arg	Lys		
	320		325		330
Gly Gly Val Leu	Ala Gln Ile Lys Ser	Gln Lys Val Gln Asp	Ile		
	335		340		345
Leu Ala Phe Tyr	Leu Gly Arg Leu Glu	Thr Thr Asn Glu Val	Thr		
	350		355		360
Asp Ser Asp Phe	Glu Thr Arg Asn Phe	Trp Ile Gly Leu Thr	Tyr		
	365		370		375
Lys Thr Ala Lys	Asp Ser Phe Arg Trp	Ala Thr Gly Glu His	Gln		
	380		385		390
Ala Phe Thr Ser	Phe Ala Phe Gly Gln	Pro Asp Asn His Gly	Leu		
	395		400		405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450

Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaaggact ccttcgctg ggccacaggg gagcaccagg ccttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cggacgcgtg ggctgggagc tgcaaagcgt gtcccgccgg gtcccgagc 50
gtcccgagc ctcgccccgc catgctcctg ctgctggggc tgtgacctggg 100
gctgtccctg tgtgtggggg cgcaggaaga ggcgcagagc tggggccact 150
cttcggagca ggatggactc aggggtccga ggcaagtcag actgttgagc 200

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700
gatgtgcttg tgcggcctca gaaggcaggg aaagatgtca caggaagccc 1750
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800
ggagctacct caccacaaag gagctgctga gctcctggct gcaaagtgc 1850
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900
gagctaccgc ttcctcactc ccttcacctc catgaagctg agggggcccg 1950
tcccacgcac ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000
ggacccgaac cggtggtgca gagcgtgcga ggagctggca cgcagccagg 2050
acctttgctc aagaagccaa actccgtcaa aaaaaaacia aacaaaacia 2100
aaaaaagaca tgggagagat ggtgtttttc ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcaccttg atcttggaac tcccagcctc cagaactgtg 2250
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
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Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

Arg	Val	Lys	Glu	Lys 125	Arg	Asn	Lys	Thr	Thr 130	Glu	Glu	Asn	Gly	Glu 135
Lys	Gly	Thr	Glu	Ile 140	Phe	Arg	Ala	Ser	Ala 145	Val	Ile	Pro	Ser	Lys 150
Asp	Lys	Ala	Ala	Phe 155	Phe	Leu	Ser	Tyr	Glu 160	Glu	Leu	Leu	Gln	Arg 165
Arg	Leu	Gly	Lys	Tyr 170	Glu	His	Ser	Ile	Ser 175	Val	Arg	Pro	Gln	Gln 180
Leu	Ser	Gly	Arg	Leu 185	Ser	Val	Asp	Val	Asn 190	Ile	Leu	Glu	Ser	Ala 195
Gly	Ile	Ala	Ser	Leu 200	Glu	Val	Leu	Pro	Leu 205	His	Asn	Ser	Arg	Gln 210
Arg	Gly	Ser	Gly	Arg 215	Gly	Glu	Asp	Asp	Ser 220	Gly	Pro	Pro	Pro	Ser 225
Thr	Val	Ile	Asn	Gln 230	Asn	Glu	Thr	Phe	Ala 235	Asn	Ile	Ile	Phe	Lys 240
Pro	Thr	Val	Val	Gln 245	Gln	Ala	Arg	Ile	Ala 250	Gln	Asn	Gly	Ile	Leu 255
Gly	Asp	Phe	Ile	Ile 260	Arg	Tyr	Asp	Val	Asn 265	Arg	Glu	Gln	Ser	Ile 270
Gly	Asp	Ile	Gln	Val 275	Leu	Asn	Gly	Tyr	Phe 280	Val	His	Tyr	Phe	Ala 285
Pro	Lys	Asp	Leu	Pro 290	Pro	Leu	Pro	Lys	Asn 295	Val	Val	Phe	Val	Leu 300
Asp	Ser	Ser	Ala	Ser 305	Met	Val	Gly	Thr	Lys 310	Leu	Arg	Gln	Thr	Lys 315
Asp	Ala	Leu	Phe	Thr 320	Ile	Leu	His	Asp	Leu 325	Arg	Pro	Gln	Asp	Arg 330
Phe	Ser	Ile	Ile	Gly 335	Phe	Ser	Asn	Arg	Ile 340	Lys	Val	Trp	Lys	Asp 345
His	Leu	Ile	Ser	Val 350	Thr	Pro	Asp	Ser	Ile 355	Arg	Asp	Gly	Lys	Val 360
Tyr	Ile	His	His	Met 365	Ser	Pro	Thr	Gly	Gly 370	Thr	Asp	Ile	Asn	Gly 375
Ala	Leu	Gln	Arg	Ala 380	Ile	Arg	Leu	Leu	Asn 385	Lys	Tyr	Val	Ala	His 390
Ser	Gly	Ile	Gly	Asp 395	Arg	Ser	Val	Ser	Leu 400	Ile	Val	Phe	Leu	Thr 405
Asp	Gly	Lys	Pro	Thr	Val	Gly	Glu	Thr	His	Thr	Leu	Lys	Ile	Leu

Ala	Ala	Ala	Ala	Ala	Pro	Pro	Gly	Leu	Arg	Leu	Leu	Leu	Leu	Leu	Leu	20	25	30
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu		35	40	45
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile		50	55	60
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu		65	70	75
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu		80	85	90
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu		95	100	105
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr		110	115	120
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr		125	130	135
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln		140	145	150
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr		155	160	165
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly		170	175	180
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp		185	190	195
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu		200	205	210
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val		215	220	225
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys		230	235	240
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr		245	250	255
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys		260	265	270
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met		275	280	285
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn		290	295	300
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn				

305		310		315
Ile Val Gly Lys	Ala His Ser Asp Tyr	Met Leu Tyr Val Tyr	Asp	
320		325		330
Pro Pro Thr Thr	Ile Pro Pro Pro Thr	Thr Thr Thr Thr Thr	Thr	
335		340		345
Thr Thr Thr Thr	Thr Thr Ile Leu Thr	Ile Ile Thr Asp Ser	Arg	
350		355		360
Ala Gly Glu Glu	Gly Ser Ile Arg Ala	Val Asp His Ala Val	Ile	
365		370		375
Gly Gly Val Val	Ala Val Val Val Phe	Ala Met Leu Cys Leu	Leu	
380		385		390
Ile Ile Leu Gly	Arg Tyr Phe Ala Arg	His Lys Gly Thr Tyr	Phe	
395		400		405
Thr His Glu Ala	Lys Gly Ala Asp Asp	Ala Ala Asp Ala Asp	Thr	
410		415		420
Ala Ile Ile Asn	Ala Glu Gly Gly Gln	Asn Asn Ser Glu Glu	Lys	
425		430		435
Lys Glu Tyr Phe	Ile			
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<210> 62
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 62
 ggcttctgct gttgctcttc tccg 24

<210> 63
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 63
 gtacactgtg accagtcagc 20

<210> 64
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 64
atcatcacag attcccgagc 20

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
ggggcggtg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50
cctcgggccc gaccgcag gaaagactga ggccgcggcc tgccccgcc 100
ggctccctgc gcgcgcgcg cctcccggga cagaagatgt gctccagggt 150
ccctctgctg ctgcgcgtgc tctgtact ggccctgggg cctgggggtgc 200
agggctgccc atccggctgc cagtgcagcc agccacagac agtcttctgc 250
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ggggctgtac gtctttgaga acggcatcac catgctcgac gcaagcagct 350
ttgcggcct gccgggctg cagctcctgg acctgtcaca gaaccagatc 400

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900
 cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950
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 gggcacggcg ggccttgcca tgtgtgtgta acgcatgcct gggccctgct 2250
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 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450
 atttattctg ggaagatggt tttcaaactc agagacaagg actttgggtt 2500
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550
 aaaaa 2555

<210> 69
 <211> 598
 <212> PRT
 <213> Homo Sapien

<400> 69
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 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
 95 100 105
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110	115	120
Ala Leu Arg Leu	Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly	
125	130	135
Leu Phe Ser Arg	Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp	
140	145	150
Asn Gln Leu Glu	Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly	
155	160	165
Leu Thr Arg Leu	Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu	
170	175	180
Arg Pro Glu Asp	Leu Ala Gly Leu Ala Ala Leu Gln Glu Leu Asp	
185	190	195
Val Ser Asn Leu	Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly	
200	205	210
Leu Phe Pro Arg	Leu Arg Leu Leu Ala Ala Ala Arg Asn Pro Phe	
215	220	225
Asn Cys Val Cys	Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu	
230	235	240
Ser His Val Thr	Leu Ala Ser Pro Glu Glu Thr Arg Cys His Phe	
245	250	255
Pro Pro Lys Asn	Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala	
260	265	270
Asp Phe Gly Cys	Pro Ala Thr Thr Thr Thr Ala Thr Val Pro Thr	
275	280	285
Thr Arg Pro Val	Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu	
290	295	300
Ala Pro Thr Trp	Leu Ser Pro Thr Ala Pro Ala Thr Glu Ala Pro	
305	310	315
Ser Pro Pro Ser	Thr Ala Pro Pro Thr Val Gly Pro Val Pro Gln	
320	325	330
Pro Gln Asp Cys	Pro Pro Ser Thr Cys Leu Asn Gly Gly Thr Cys	
335	340	345
His Leu Gly Thr	Arg His His Leu Ala Cys Leu Cys Pro Glu Gly	
350	355	360
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg	
365	370	375
Pro Ser Pro Thr	Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr	
380	385	390
Leu Gly Ile Glu	Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu	
395	400	405

Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg
410		415 420
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr	
425		430 435
Leu Arg Leu Pro	Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu	
440		445 450
Arg Pro Asn Ala	Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro	
455		460 465
Gly Arg Val Pro	Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr	
470		475 480
Pro Pro Ala Val	His Ser Asn His Ala Pro Val Thr Gln Ala Arg	
485		490 495
Glu Gly Asn Leu	Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val	
500		505 510
Leu Leu Ala Ala	Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg	
515		520 525
Arg Gly Arg Ala	Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val	
530		535 540
Gly Pro Gly Ala	Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro	
545		550 555
Leu Glu Pro Gly	Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu	
560		565 570
Pro Ser Gly Ser	Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly	
575		580 585
Pro Gly Leu Gln	Ser Pro Leu His Ala Lys Pro Tyr Ile	
590		595

<210> 70
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 70
 ccctccactg cccacccgac tg 22

<210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<400> 71
  cggttctggg gacgtaggg ctcg 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
  ctgcccaccg tccacctgcc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
  aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
  acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
  ggcactagga caaccttctt cccttctgca ccactgcccg tacccttacc 50
  cgccccgcca cctccttgct accccactct tgaaaccaca gctgttgcca 100
  ggggtccccag ctcatgccag cctcatctcc tttcttgcta gcccccaaag 150
  ggccctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200
  gccctctggt tgagttgggg ggcagctctg ggggccgtgg cttgtgccat 250
  ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
  gccggctgca ggggacagga ggccctccc agaatgggga agggatatccc 350
  tggcagagtc tcccggagca gagttccgat gccctggaag cctgggagaa 400

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Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
			125						130					135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
			140						145					150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
			155						160					165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
			170						175					180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
			185						190					195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
			200						205					210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
			215						220					225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
			230						235					240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
			245					250						

<210> 77
 <211> 2849
 <212> DNA
 <213> Homo Sapien

<400> 77
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 ggctgcagag acctcggaga ccgcgcgggg gagacggagg tgctgtgggt 100
 gggggggacc tgtggctgct cgtaccgccc cccaccctcc tcttctgcac 150
 tgccgtcttc cggaagacct tttcccttgc tctgttttct tcaccgagtc 200
 tgtgcatcgc cccggacctg gccgggagga ggcttggccg gcgggagatg 250
 ctctaggggc ggcgcgggag gagcggccgg cgggacggag ggcccggcag 300
 gaagatgggc tcccgtggac agggactctt gctggcgtag tgcttgcctc 350
 ttgcctttgc ctctggcctg gtcttgagtc gtgtgccccca tgtccagggg 400
 gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450
 tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500
 aggggctccc tgcttcccgg tgcttgctgt gctgtgaccc cggtacctcc 550
 atgtaccggg cgaccgccgt gccccagatc aacatcacta tcttgaaagg 600
 ggagaagggt gaccgcggag atcgaggcct ccaagggaaa tatggcaaaa 650

<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccgggtgctt gcgctgctgt gaccccggtg cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
gcggagcatc cgctgcggtc ctgcgcgaga ccccgcgcg gattcgccgg 50
tccttccccg gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
gacaaaaact aaactgaaat ttaaaatggt ctccggggga gaagggagct 250
tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
gtcatctctt tctaaggga tcaaggcaa tgagcccgta tatacttcaa 400
ctcaagaaga ctgcattaat tcttgctggt caacaaaaaa catatcaggg 450
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
acccaactgc tacctatctt tctgtcccaa cgaggaagcc tgtccattga 550
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
tttggaatct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
tttctcttga tcaagaaata gctcatctgc tgcttgaaaa tgtgagtgcg 900
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

TTTCTTCTGA

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu		
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn		
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg		
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn		
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly		
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu		
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

<210> 84
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 84
 agggaggatt atccttgacc tttgaagacc 30

<210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 85
 gaagcaagtg cccagctc 18

<210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 86
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[illegible]

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<400> 87
caccgtagct gggagcgcac tcac 24
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<220>
<223> Synthetic oligonucleotide probe

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<211> 49
<212> DNA
<213> Artificial Sequence
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<220>
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<211> 957
<212> DNA
<213> Homo Sapien
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64

[illegible]

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Phe	Ala	Ser	Leu	Cys	Ala	Trp	Tyr	Ser	Gly	Tyr	Leu	Leu	Ala	Glu	
				20					25					30	
Leu	Ile	Pro	Asp	Ala	Pro	Leu	Ser	Ser	Ala	Ala	Tyr	Ser	Ile	Arg	
				35					40					45	
Ser	Ile	Gly	Glu	Arg	Pro	Val	Leu	Lys	Ala	Pro	Val	Pro	Lys	Arg	
				50					55					60	
Gln	Lys	Cys	Asp	His	Trp	Thr	Pro	Cys	Pro	Ser	Asp	Thr	Tyr	Ala	
				65					70					75	
Tyr	Arg	Leu	Leu	Ser	Gly	Gly	Gly	Arg	Ser	Lys	Tyr	Ala	Lys	Ile	
				80					85					90	
Cys	Phe	Glu	Asp	Asn	Leu	Leu	Met	Gly	Glu	Gln	Leu	Gly	Asn	Val	
				95					100					105	
Ala	Arg	Gly	Ile	Asn	Ile	Ala	Ile	Val	Asn	Tyr	Val	Thr	Gly	Asn	
				110					115					120	
Val	Thr	Ala	Thr	Arg	Cys	Phe	Asp	Met	Tyr	Glu	Gly	Asp	Asn	Ser	
				125					130					135	
Gly	Pro	Met	Thr	Lys	Phe	Ile	Gln	Ser	Ala	Ala	Pro	Lys	Ser	Leu	
				140					145					150	
Leu	Phe	Met	Val	Thr	Tyr	Asp	Asp	Gly	Ser	Thr	Arg	Leu	Asn	Asn	
				155					160					165	

Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg
			170						175					180
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly
			185						190					195
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser
			200						205					210
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln
			215						220					225
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser					
			230						235					

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<220>
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<400> 92
 aatgtgacca ctggactccc 20

<210> 93
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<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 aggcttgga ctccttc 18

<210> 94
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<220>
 <223> Synthetic oligonucleotide probe

<400> 94
 aagattcttg agcgattcca gctg 24

<210> 95
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SECRET

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<400> 96
ctcaagaagc acgcgtactg c 21
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<220>
<223> Synthetic oligonucleotide probe

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<400> 97
ccaacctcag cttccgcctc tacga 25
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<220>
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<400> 98
catccaggct cgccactg 18
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<210> 99
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<220>
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<400> 99
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<223> Synthetic oligonucleotide probe

<400> 101

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<223> Synthetic oligonucleotide probe

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<223> Synthetic oligonucleotide probe

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<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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ctggcgggtgt cctctcctt 19

<210> 105

<211> 21

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<213> Artificial Sequence

<220>

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<210> 106

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<213> Artificial Sequence

<220>

[illegible]

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<213> Artificial Sequence
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<400> 107
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<211> 19
<212> DNA
<213> Artificial Sequence
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<400> 108
tggctcccag cttggaaga 19

```
<210> 109
<211> 30
<212> DNA
<213> Artificial Sequence
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```
<400> 109
caqctcttgg ctgtctccag tatgtaccca 30
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<210> 110
<211> 21
<212> DNA
<213> Artificial Sequence
```

<400> 110
gatgcctctg ttccctgcaca t 21

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<210> 111
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<213> Artificial Sequence
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<400> 111

098443-06

<210> 117

[illegible]

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<220>
<223> Synthetic oligonucleotide probe

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<400> 118
ctatgaaatt aaccctcact aaaggggaagg ctcgccactg gtcgtaga 48
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<220>
<223> Synthetic oligonucleotide probe

<400> 119
ggatttctaatt acgactcact atagggcaag gagccggggac ccaggaga 48

<220>
<223> Synthetic oligonucleotide probe

<400> 120
ctatgaaatt aaccctcact aaagggaggg ggccttggt gctgagt 47